



**State of California
Air Resources Board
Screening Questionnaire
for
Runway Landfill (Site 1)**

**Naval Air Station
Moffett Field, California**

October 1988

Submitted By:

HAZWRAP Support Contractor Office
Martin Marietta Energy Systems, Inc.
Oak Ridge, Tennessee 37831
for the
U.S. Department of Energy
for

DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN BRUNO, CALIFORNIA 94066-0727

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In September 1986, the California Legislature passed and the governor signed AB 3374 (Calderon Bill). The Calderon Bill affects California Health and Safety Code (HSC) Section 41805.5 and requires that all owners and operators of inactive hazardous waste disposal sites perform air testing to determine the following:

- The composition of gas streams above the site
- The presence or absence of specified air contaminants in the ambient air
- Whether off-site subsurface migration of landfill gas is occurring.

The Calderon Bill further requires that the air monitoring programs be carried out under the jurisdiction of the Air Pollution Control District (APCD).

The owners and operators of inactive waste disposal sites are required to submit the following to the APCD:

- A completed Screening Questionnaire
- A detailed test plan
- A final report of the results of the air monitoring tests.

This document is the completed Screening Questionnaire for the Moffett Naval Air Station's Runway Landfill (Site 1), which is respectfully submitted to Mr. Thomas Brennan, of the Bay Area Air Quality Management District.

STATE OF CALIFORNIA
AIR RESOURCES BOARD

SCREENING QUESTIONNAIRE FOR INACTIVE SOLID WASTE DISPOSAL SITES
Health and Safety Code Section 41805.5

SITE OWNERSHIP

Site name Runway Landfill, Moffett NAS

Site location Northeast End of Runway 32R

Site address Gate 15 - Zook Road
Moffett Naval Air Station
Sunnyvale, California

Nearest Cross Streets Zook Road

Current site owner United States Department of the Navy

Street address Moffett Field, Moffett Naval Air Station

Mailing address Moffett Field, Moffett Naval Air Station
California 94035

Contact Person Western Division of the **Telephone Number** (415) 877-7494
Naval Facilities Engineering Command

Previous site owners

Provide the name and mailing address of all the previous site owners with the most recent owner first. (Attach additional pages if necessary.)

Owner United States Department of	Owner United States War Department
the Navy - Solid Waste Disposal Office	(United States Army)
Mailing 3930 Pender Drive	Mailing
Address Fairfax, Virginia 22030	Address Washington, D.C. 20310-1500

Dates 1942 - Present

Dates 1935 - 1942

Owner United States Department of
the Navy

Owner

Mailing
Address Washington, D.C.

Mailing
Address

Dates 1931 - 1935

Dates

Company performing site maintenance U.S. Navy - Public Works Department

Mailing address Moffett Field, Moffett Naval Air Station
California 94035

Contact person Telephone number

Public Works Officer

(415) 966-5330

SITE HISTORY

Date site started receiving waste: 1962 Date Site stopped receiving waste: 1978

Percent of site filled by:

January 1, 1960 0% January 1, 1970 50%

January 1, 1980 100% January 1, 1984 100%

Was the waste received by this site ever burned on a routine basis? YES

NO

If yes, provide the following:

Date site started burning on a routine basis:

Date site stopped burning on a routine basis:

Has landfill gas migration ever been detected off site?

YES

NO

If yes, describe the event(s) in detail including date(s). (Attach additional pages if necessary.)

Have landfill gas odors ever been detected off site?

YES

☒ NO

If yes, describe the event(s) in detail including date(s). (Attach additional sheets if necessary.)

Has any landfill gas, ambient air, or gas migration testing ever been conducted at the site? YES ☒ NO

If yes, summarize the testing and the results including date(s). (Attach additional sheets if necessary.)

Has this site ever been subject to any enforcement action by any Federal, state, or local agency as a result of underground gas migration or gaseous emissions to the atmosphere?

YES

☒ NO

If yes, summarize the enforcement action(s) and reason(s) including date(s). (Attach additional sheets if necessary.)

SITE DESCRIPTION

Type of fill (Circle appropriate line)

Canyon

Pit

Area (Trench)

Other-Describe

Provide estimate for:

Diked off marshland

Total Site Acreage 492,450.ft²

Waste Disposal Area Acreage 389,150.ft²

Volume of Waste (cubic yards) 14,413

Quantity of Waste (tons) 22,340

Minimum Depth of Waste (feet) 2'

Maximum Depth of Waste (feet) 20+'

Average Depth of Waste (feet) 10'

Average Thickness Of Existing Top Cover (feet) 2'

Does This Site Have A Liner? YES **NO**

If Yes, Describe:

Type of Cover Material

Provide a map to scale showing the boundaries of the total site and the waste disposal area. See Figure 1

Identify all existing land uses on this site. (Circle appropriate item(s)).

Single family residential

Hotel

Multi family residential

Park

Commercial

Undeveloped

Industrial

Other (specify)

Hospital

Pistol Range

School

Storage Area for electrical equipment (100 yds. x 50 yds.)

For any undeveloped areas of this site, what land uses are currently proposed? (Circle appropriate item(s).)

Single family residential

Hotel

Multi family residential

Park

Commercial

Industrial

Other (specify)

Hospital

Possible upgrade of existing pistol range

School

WASTE DESCRIPTION

Estimate of Solid Waste Received (Total of entries for residential, commercial, industrial, demolition, and other should add up to 100%.)

% Residential

% Commercial

% Industrial 80

% Demolition 20

% Other

Describe material under "other" and give its percentage.

Material

Percentage

Were liquids ever accepted at this site?

YES

NO

If yes, describe all liquids received, their corresponding volumes and the disposal methods employed such as injection, evaporation ponds, containers, codisposal, etc. (Attach additional sheets if necessary.)

Liquid	Gallons	Disposal method
Toluene, MEK, TCE & solvents	110,000	Burial
Transformer Oil	1,260	Burial
Waste Oil	3,300	Burial of 55 gal drums
Paints and thinners	24,000	Burial
JP Fuel	51,000	Burial
Possible:		
used lube oil	12,000	Burial
dry cleaning solvents	550	Burial

Were hazardous wastes in greater than household amounts ever accepted at this site?

☒ YES ☐ NO

If yes, describe all hazardous wastes received and the corresponding volumes. (Attach additional sheets if necessary.)

Hazardous Waste	Volume
Asbestos	16,000 pounds
PCBs	1,260 gallons transformer oil 580 transformer filters unknown amounts of sawdust to absorb transformer oil spills
Lead compounds	19,000 fuel filters with fuel sludge, lead compounds and rust
Ordinance	unknown volumes (possibly none)

SURROUNDING LAND USE

Give the distance in miles (to the nearest 0.01 mile) to the nearest:

Occupied building

.51

Describe the Building and Use

Ammunition Dump Security Office

Residential Area 1.19

School 2.10 Crittenden School

Hospital 3.58 El Camino

Park 0.86 Shoreline at Mountain View

Shopping Center 3.11

Business 0.70 Space Science Research Lab

Public Thoroughfare 0.92 Crittenden Lane

Provide an aerial photograph or topographic map showing the surrounding area within two miles of the solid waste disposal site's perimeter. The photograph or map must identify all land uses in the area and highlight areas of high population such as housing, schools, restaurants, and shopping centers. For areas that are currently undeveloped, the proposed land uses must be shown.

See Figure 2
and Figure 3

What is the population within two (2) miles of the perimeter of the site? Indicate the source of the information and the date of the data. (Possible sources include the county planning agency and the 1980 Federal Decennial Census):

Population	Source	Date
4,500	U.S. Navy-Public Works Dept.	1988

ADDITIONAL INFORMATION Moffett NAS

Attach a copy of any waste discharge permits under which the site operated.

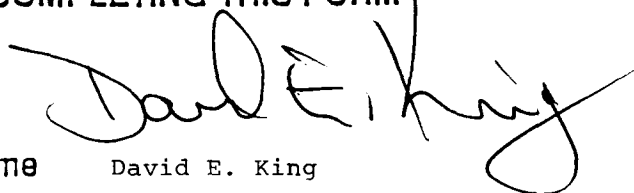
Please provide any comments or additional information which you feel will assist in evaluating your site.

The population during working hours (08:00 AM to 05:00 PM) is approximately 10,000 people.

For further information on the Runway Site, please refer to Appendix A.

PERSON COMPLETING THIS FORM

Signature



Printed Name David E. King

Title Project Scientist

Company Name IT Corporation

Date October 4, 1988

Address 17461 Derian Avenue
Suite 190

Phone (714) 261-6441

City, State, ZIP Irvine, California 92714

Appendix A

The Moffett NAS Runway Landfill (Site 1) was in operation from the early 1960's to 1978. In an initial study of the landfill by the Naval Energy and Environmental Support Activity of Port Hueneme, California (NEESA B-049), it is stated that the "landfill was designed to hold refuse, debris, and scrap equipment; however, the various shops at NAS Moffett Field used the Landfill to dispose of hazardous materials." It has been reported that chemicals and oils were placed in unlined pits into the early 1970's. Other wastes not mentioned in the Screening Questionnaire include ash from the incineration of paper, film, and plastics (approximately 400 to 500 pounds per week until 1979) and the remains of two plane crashes. All fuel was removed from the destroyed planes prior to emplacement in the landfill.

On August 22, 1985 Earth Sciences Associates (ESA) of Palo Alto, California were drilling ground monitoring wells and on August 30, 1985 they were taking soil borings on the Runway Landfill Site. In the process of implementing their work plan, ESA encountered high levels of methane in the northern position of the landfill. A groundwater monitoring well and two soil borings were abandoned due to unsafe levels of methane. Groundwater monitoring well W1-4A was abandoned at 20 feet. Soil Boring A1-5 was terminated at 3 feet due to high levels of methane. The boring was moved over 20 feet to the west. The alternative soil boring was also terminated at 3 feet because of high levels of methane. Figure 4 is included in this appendix to portray the locations of these events.

The ESA samples showed slightly elevated levels of zinc and lead in 1 soil sample. Groundwater samples had slightly high levels of lead and other metals. Volatile organic compounds were analyzed to be less than 0.1 milligrams/kilograms in the soil samples. TCE and toluene were found at 1-7 milligrams/liter in the groundwater samples. PCBs were not detected in the groundwater but were detected at 7 milligrams/kilograms in the soil.

FAS:MFT



**State of California
Air Resources Board
Screening Questionnaire
for
Golf Course Landfill (Site 2)**

**Naval Air Station
Moffett Field, California**

October 1988

Submitted By:

**HAZWRAP Support Contractor Office
Martin Marietta Energy Systems, Inc.
Oak Ridge, Tennessee 37831
for the
U.S. Department of Energy
for**

**DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN BRUNO, CALIFORNIA 94066-0727**

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- The composition of gas streams above the site
- The presence or absence of specified air contaminants in the ambient air
- Whether off-site subsurface migration of landfill gas is occurring.

The Calderon Bill further requires that the air monitoring programs be carried out under the jurisdiction of the Air Pollution Control District (APCD).

The owners and operators of inactive waste disposal sites are required to submit the following to the APCD:

- A completed Screening Questionnaire
- A detailed test plan
- A final report of the results of the air monitoring tests.

This document is the completed Screening Questionnaire for the Moffett Naval Air Station's Golf Course Landfill (Site 2), which is respectfully submitted to Mr. Thomas Brennan, of the Bay Area Air Quality Management District.

STATE OF CALIFORNIA
AIR RESOURCES BOARD

SCREENING QUESTIONNAIRE FOR INACTIVE SOLID WASTE DISPOSAL SITES
Health and Safety Code Section 41805.5

SITE OWNERSHIP

Site name Golf Course Landfill, Moffett NAS

Site location Northwest end of golf course

Site address Zook Road and Northern Perimeter Road

Nearest Cross Streets Zook Road, Northern Perimeter Road, Marriage Road

Current site owner United States Department of the Navy

Street address Moffett Field, Moffett Naval Air Station

Mailing address Moffett Field, Moffett Naval Air Station
California 94035

Contact Person Western Division of the Telephone Number (415) 877-7494
Naval Facilities Engineering Command

Previous site owners

Provide the name and mailing address of all the previous site owners with the most recent owner first. (Attach additional pages if necessary.)

Owner United States Department of the
Navy-Solid Waste Disposal Office
Mailing 3930 Pender Drive
Address Fairfax, Virginia 22030

Owner United States War Department
(United States Army)
Mailing Washington, D.C. 20310-1500
Address

Dates 1942 - Present

Dates 1935 - 1942

Owner United States Department of
the Navy
Mailing Washington, D.C.
Address

Owner
Mailing
Address

Dates 1931 - 1935

Dates

Company performing site maintenance U.S. Navy - Public Works Department

Mailing address Moffett Field, Moffett Naval Air Station
California 94035

Contact person Telephone number

Public Works Officer (415) 966-5330

SITE HISTORY

Date site started receiving waste: 1940s Date Site stopped receiving waste: 1962 (Burial)
Burn pit in action until 1971

Percent of site filled by:

January 1, 1960 85% January 1, 1970 100%

January 1, 1980 100% January 1, 1984 100%

Was the waste received by this site ever burned on a routine basis? ☒ YES ☐ NO

Burn pit for outdated flares and cartridge activated devices.
If yes, provide the following:

Date site started burning on a routine basis: unknown

Date site stopped burning on a routine basis: 1971

Has landfill gas migration ever been detected off site? YES ☒ NO

If yes, describe the event(s) in detail including date(s). (Attach additional pages if necessary.)

Have landfill gas odors ever been detected off site?

YES

☒ NO

If yes, describe the event(s) in detail including date(s). (Attach additional sheets if necessary.)

Has any landfill gas, ambient air, or gas migration testing ever been conducted at the site?

YES

☒ NO

If yes, summarize the testing and the results including date(s). (Attach additional sheets if necessary.)

Has this site ever been subject to any enforcement action by any Federal, state, or local agency as a result of underground gas migration or gaseous emissions to the atmosphere?

YES

☒ NO

If yes, summarize the enforcement action(s) and reason(s) including date(s). (Attach additional sheets if necessary.)

SITE DESCRIPTION

Type of fill (Circle appropriate line)

Canyon

Pit

Area (Trench)

Other-Describe

Provide estimate for:

Total Site Acreage 4.65 acres

Waste Disposal Area Acreage 4.65 acres

Volume of Waste (cubic yards) 7,500

Quantity of Waste (tons) 11,625

Minimum Depth of Waste (feet) 4'

Maximum Depth of Waste (feet) 8'

Average Depth of Waste (feet) 6'

Average Thickness Of Existing Top Cover (feet) unknown

Does This Site Have A Liner? YES NO

If Yes, Describe:

Type of Cover Material offsite soils

Provide a map to scale showing the boundaries of the total site and the waste disposal area.

See Figure 1

Identify all existing land uses on this site. (Circle appropriate item(s)).

Single family residential

Hotel

Multi family residential

Park

Commercial

Undeveloped

Industrial

Other (specify)

Hospital

Small portion of Golf Course

School

For any undeveloped areas of this site, what land uses are currently proposed? (Circle appropriate item(s).)

Single family residential

Hotel

Multi family residential

Park

Commercial

Industrial

Other (specify)

Hospital

School

WASTE DESCRIPTION

Estimate of Solid Waste Received (Total of entries for residential, commercial, industrial, demolition, and other should add up to 100%.)

% Residential

% Commercial

% Industrial 80%

% Demolition 20%

% Other

Describe material under "other" and give its percentage.

Material

Percentage

Were liquids ever accepted at this site?

YES

NO

If yes, describe all liquids received, their corresponding volumes and the disposal methods employed such as injection, evaporation ponds, containers, codisposal, etc. (Attach additional sheets if necessary.)

Liquid	Gallons	Disposal method
Probable Amounts:		
Toluene, MEK, TCE, and Solvents	75,000-150,000	Burial
Transformer Oil	870	Burial
Paints and thinners	43,500	Burial

Were hazardous wastes in greater than household amounts ever accepted at this site?

☒ YES ☐ NO

If yes, describe all hazardous wastes received and the corresponding volumes. (Attach additional sheets if necessary.)

Hazardous Waste	Volume
Asbestos	14,000 pounds
PCBs	870 transformer oil filters unknown amounts of sawdust to absorb transformer oil spills
Lead compounds	1,440 fuel filters with fuel sludge, lead compounds and rust
Ordinance	unknown volumes
Liquid waste as described on page 5	

SURROUNDING LAND USE

Give the distance in miles (to the nearest 0.01 mile) to the nearest:

Occupied building	Describe the Building and Use
.18	Ammunition Dump Security Office

Residential Area	1.02 Enlisted Men's Barracks	School	2.07 Whisman School
Hospital	3.38 El Camino	Park	1.11 Shoreline at Mountain View
Shopping Center	3.31	Business	.50 Space Science Research Lab
Public Thoroughfare	.58 1st Ave (Sunnyvale)		

Provide an aerial photograph or topographic map showing the surrounding area within two miles of the solid waste disposal site's perimeter. The photograph or map must identify all land uses in the area and highlight areas of high population such as housing, schools, restaurants, and shopping centers. For areas that are currently undeveloped, the proposed land uses must be shown.

See Figures 2 & 3

What is the population within two (2) miles of the perimeter of the site? Indicate the source of the information and the date of the data. (Possible sources include the county planning agency and the 1980 Federal Decennial Census).

Population	Source	Date
4,500	U.S. Navy-Public Works Dept.	1988

ADDITIONAL INFORMATION Moffett NAS

Attach a copy of any waste discharge permits under which the site operated.

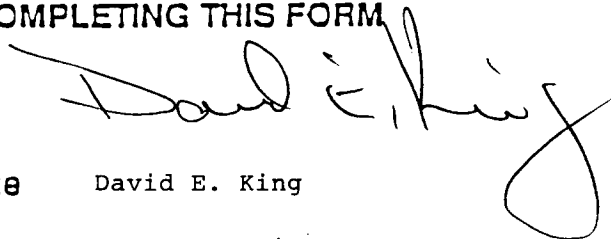
Please provide any comments or additional information which you feel will assist in evaluating your site.

The population during working hours (08:00 AM to 05:00 PM)
is approximately 10,000 people.

For further information on the Golf Course Landfill, please see Appendix A.

PERSON COMPLETING THIS FORM

Signature



Printed Name David E. King

Title Project Scientist

Company Name IT Corporation

Date October 4, 1988

Address 17461 Derian Avenue
Suite 190

Phone (714) 261-6441

City, State, ZIP Irvine, California 92714

OPTIONAL QUESTIONS

LANDFILL GAS COLLECTION SYSTEM

Is a landfill gas collection system installed? YES ☒ NO

If yes, provide the following information:

Date system installation completed Date system started operating

Is the system currently operating? YES NO

If no, explain why.

Percent of time system is on line

Name of company operating the system

Mailing address

Contact Person

Title Telephone number

APCD or AQMD application and permit numbers:

Application number

Permit number

System Design (Circle applicable items)

Vertical wells Horizontal Collection Trenches

Perimeter migration control system Interior migration control system

Gas recovery system, interior collection only

Gas collection system capacity in CFM

Disposition of collected landfill gas (Circle applicable items.)

Vented to Atmosphere Flared
Sold as Fuel Used as Fuel on Site

Appendix A

This landfill reportedly operated from the 1940's to the early 1960's. In the Initial Assessment Study prepared by the Naval Energy and Environmental Support Activity of Port Hueneme, California (NEESA 13-049), they state that "little information is available on the specific quantities of wastes that were disposed of at this site, or on the exact location of the landfill". The report goes on to state that the same shops that produced waste that was disposed of at the Runway Landfill (Site 1) would have had access to the Golf Course Landfill (Site 2).

The amounts of waste listed in this Screening Questionnaire are calculated from the rates and operating years given in the aforementioned Initial Assessment Study.